

Non-game Wildlife Projects Proposed by Region



Osprey nest platform under construction



Survey for Mountain yellow-legged frogs

Non-Game Fish and Wildlife Trust One-Time General Fund Augmentation	
	General Fund Total
West Nile Virus Allocation-Detail Provided Above	\$1,500,000
Invasive Species Allocation-Detail Provided Above	\$900,000
Enforcement Allocation-Detail Provided Above	\$900,000
Outreach and Education Allocation-Detail Provided Above	\$120,000
TOTAL PROGRAM ALLOCATIONS	\$ 3,420,000
Region 1	
Honey Lake Water Cons.	\$348,931
R1 Lands Riparian Restoration	\$173,532
Ash Creek Upland Enhancement	\$134,348
Battle Creek Grassland Enhance	\$55,978
Horseshoe Ranch Wildlife Area Riparian Enhancement	\$22,391
Provide State match for HSUF	\$33,587
Region 2	
Woodbridge Ecological Reserve Crane Habitat	\$67,442
Hallelujah Junction Riparian Enhance	\$17,465
Teal Brook Riparian and Conservation Easement Acquisition	\$225,099
Stone Ridge Ecological Reserve Habitat Enhance	\$39,185
Provide State Match for PSMFC/CSUF contracts -field support	\$33,587
Region 3 (pre-org R3)	
Elkhorn Slough Pond enhance	\$39,185
Moss Landing Wildlife Area Anti-perch	\$3,359
Santa Rosa Plain Invasive Plant Management	\$45,902
Cunningham Marsh Conservation Easement Blackberry Removal	\$2,351
Santa Rosa Plain Eucalyptus Removal	\$111,956
Indian Valley Wildlife Area Osprey Platform	\$5,038
Napa Sonoma Plover Habitat Enhance	\$55,978
Carizzo Plain Riparian Fencing	\$151,141
Canada de los Osos Ecological Reserve Grassland Weed Control	\$11,196
Napa Sonoma Marsh Revegetation	\$5,598
Eden Landing Burrowing Owl Habitat Enhancement	\$16,793
Carizzo Yellow Star Thistle Removal	\$8,397
Santa Rosa Plain Blackberry Removal	\$1,679
Napa River Ecological Reserve Invasive Plant Control	\$19,033
Carizzo Plain Ecological Reserve Prescribed Burn	\$27,989
Provide State Match for CSUF contracts -field support	\$33,587
Region 4	
Los Banos/Mendota Restoration Enhance Seasonal Wetlands	\$135,370
Los Banos Sandhill Crane Winter Forage Habitat Restoration	\$16,793
Regional Ecological Reserves Vernal Pool Habitat Enhancement	\$111,956
San Joaquin River Hardhead Study	\$120,328
Sierra Foothill Stream Surveys	\$214,335
Provide State Match for CSUF contracts -field support	\$33,587

Region 5	
Burton Mesa Fencing, Survey Work	\$128,750
Burrowing Owl Enhancement Project	\$13,435
Uppper Newport-Back Bay Science Center	\$895,651
Provide State Match for Resource Assessment Projects	\$33,587
Region 6	
Imperial Wildlife Area Wister Marsh Bird Management	\$173,724
Peninsular Bighorn Sheep Water Source Enhance.	\$90,685
Non-Game Desert Fisheries Down-listing and Recovery	\$235,108
Mountain Yellow-legged Frog Habitat Restoration	\$69,040
Mitigation Bank Plan for Mojave	\$223,913
Provide State Match for PSMFC/CSUF contracts -field support	\$33,587
Statewide or HQ Projects	
North Spotted Owl Mtgs. Travel	\$6,717
Urban Nuisance/Depredation Wildlife	\$283,250
California Bat Conservation Plan	\$22,451
Burrowing Owl Conservation Strategy	\$107,577
Western Pond Turtle Conservation Strategy	\$80,609
Greater Sage Grouse	\$168,354
Hoopa Fisher Study	\$93,297
Revision of Mammal Species of Special Concern Publication	\$27,429
Xantu's Murrelet Recovery Planning & Monitoring	\$30,857
Tricolored Blackbird	\$117,599
Investigation of Lead Toxicology in Raptors	\$167,934
High Elevation Aquatic Surveys	\$44,783
UC Davis, Coop Applied Research Studies	\$568,177
Burrowing Owl Surveys Statewide	\$67,174
Infrastructure Inventory DFG lands [startup]	\$279,891
R1 DFG Lands Public Ed. Trails	\$50,380
R1 DFG lands Interpretive Panels	\$30,228
R2 Lands Public Ed. Interpretative Panels	\$33,587
R4 Los Banos Grassland Educ. Ctr support	\$67,174
R4 Public outreach/education Fresno area	\$111,956
TOTAL PROJECTS	\$6,580,000
GRAND TOTAL	\$10,000,000

Note: WNV and invasive projects in regions not specifically listed here, but are described in the report.

The projects below reflect only the State funding amount. Several of the projects will be developed as Federal State Wildlife Grant projects such that a federal funding amount will contribute to achieving project completion.

Region 1

Honey Lake Wildlife Area: Water Conservation and Delivery (Lassen County) (\$348,931)

Improve water conservation and delivery by construction and installation of two (2) pivot irrigation systems (Dakin and Fleming Units). Open ditches would be replaced with pipeline and flood irrigation would be replaced with pivot irrigation systems conserving water needs which can be used elsewhere to restore wetlands. Habitats that would directly benefit (372 acres) include farmed and wetland areas that provide forage and nesting cover for sandhill cranes, shorebirds, small mammals, foraging and nesting raptors, passerines, etc. Indirect benefits include additional water delivery to existing and restored seasonal and perennial wetlands.

Riparian Restoration: Department Lands (Siskiyou, Lassen, Modoc, Humboldt Counties) (\$173,532)

Restore and enhance existing riparian habitats, installation of livestock and/or rodent exclusion fencing; Shasta Valley- 2 miles of the Little Shasta River (30 acres), Ash Creek - 2 miles along Ash Creek (up to 30 acres), Fay Slough (25 acres), Honey Lake (30 acres), Eel River (20 acres); total of 140 acres.

Ash Creek Wildlife Area: Upland Habitat Enhancement (Lassen/Modoc Counties) \$134,348)

Installation of transportable pivot irrigation system (pipeline and pivot) that will provide irrigation to 480 acres; an area currently under dryland farming. An existing well is already in place and once installed, the area would be managed for cereal grains which provide benefits to sandhill crane (premiere species for the area), Swainson's hawk, small mammals, raptors, and passerines.

Battle Creek Wildlife Area Native Grassland Restoration (\$55,978)

Restore 50 acres of native perennial grassland community. Area currently covered with exotic annual grasses and star thistle.

Horseshoe Ranch WA Riparian Restoration and Enhancement (Siskiyou County) (\$22,391)

Purchase and installation of exclusion fencing (feral horses and trespass cattle) around freshwater seeps (totals 20 acres). Materials include steel corners and H braces anchored in concrete.

Region 2

Woodbridge ER Habitat Improvements: Greater Sandhill Crane (\$67,442)

The Greater Sandhill Crane is listed as a threatened and fully protected species in California. This species winters in the Sacramento Valley, at the Woodbridge Ecological Reserve (WER). The WER is managed primarily for the sandhill crane, with management consisting of flooding marshland for optimal crane foraging opportunity and providing public education tours. This funding is needed to maintain or enhance habitat for the species and visitor facilities.

Hallelujah Junction Montane: Riparian Habitat Restoration Project, Balls Canyon Creek (\$17,465)

Balls Canyon Creek (BCC) is an important perennial stream that flows through the Hallelujah Junction Wildlife Area (HJWA). In 2005, a fence was constructed that prevents cattle from accessing BCC. This is having a positive impact on the montane riparian habitat, with significant new leader growth on the aspen and black cottonwood. The Department is proposing to plant aspen, black cottonwood and willow along both sides of BCC to augment the natural regeneration occurring now. Restoration will benefit non-game fish and wildlife species including neotropical migrant birds and pygmy rabbits.

Teal Brook Farms: Riparian Restoration and Conservation Easement Acquisition (\$225,099)

This project would establish environmental and farmland conservation practices that will promote habitat connectivity in key wildlife areas and enhancement of riparian corridors. Project provides for both habitat restoration and easement acquisition of the approximate 187 acre Teal Brook Farms property located along Coon Creek in eastern Sutter County. The project provides restoration of riparian, valley oak woodland, grassland and wetland habitats on 47 acres south of Coon Creek including a conservation easement for this portion while the remaining 140 acres, currently under rice cultivation, will be encumbered with an agricultural easement funded solely by a grant from the California Department of Conservation (CDC).

Stone Ridge Ecological Reserve (ER) (\$39,185)

Fencing for the 754 acre Stone Ridge ER that was established for the protection of State-endangered Butte County meadowfoam vernal pool habitat, winter range foraging habitat for the East Tehama deer herd, wintering Bald eagles, riparian resources supporting rearing habitat for anadromous fish, resident Western burrowing owls and numerous federally protected plants and crustaceans.

Region 3

Elkhorn Slough Ecological Reserve (ESER): Cattail Swale Freshwater Pond Habitat Enhancement Project (\$39,185)

Cattail Swale is a freshwater pond on the ESER that is a known site for breeding Santa Cruz Long-toed salamanders. This is one of only five known Santa Cruz Long-toed Salamander breeding sites within the area. The project will include making significant improvements to a degraded water outlet structure in the pond, and planning and mitigating for poor water quality inputs by implementing erosion control and best stewardship practices.

Moss Landing Wildlife Area: Install Anti-perch Material (\$3,359)

This project would purchase anti-perch material to discourage avian predators from perching on walkways and water control structures, and then preying upon snowy plover chicks at the Moss Landing Wildlife Area.

Santa Rosa Plain Ecological Reserve (ER): Invasive Plant Management for Vernal Pool Habitat (\$45,902)

The project would control six invasive weed species at three units of the Santa Rosa Plain Vernal Pool ER, and one invasive weed species at the Laguna Wildlife Area. Backpack herbicide sprayers will be used for six species, and a string “weed-eater” will be used for one species. The project will benefit vernal pool species, including State and Federally listed plants, high quality coastal prairie grassland, and freshwater marsh.

Cunningham Marsh Conservation Easement: Blackberry Removal (\$2,351)

This property is jointly managed by the Department and California Native Plant Society (CNPS). Small stands of blackberry are scattered across 10 acres of the 21.30 acre parcel. The plant is choking out endangered species Pitkin Marsh lily, [*Lilium pardalinum ssp. Pitkinense*](#), open grasslands, riparian habitats, and marshlands on the property, and severely restricting access. The objective of the project would be to remove as much of the blackberry as possible to release native species. The berry patches would be removed by surface dragging with a tractor blade, piled, dried and burned or removed. Surface removal will be top scrape and will not cut the soils deeply. Following removal, herbicide will be used to treat remaining growth and all new growth annually for three years. This has been an ongoing project at a smaller scale for many years. Non-game species that will benefit are Pitkin lilies, Valley oak, Black oak, Oregon ash, willow, native grasslands, and associated species (deer, raptors, passerine birds). Herbicide applications near lily areas would be by hand, and there are no other requirements needed for treatment. This will be the Department's portion of other funding that is presently being furnished by CNPS. CNPS members have herbicide application experience and requirements. A cooperative program is already in place with the local CNPS and volunteers are available to assist.

Santa Rosa Plain Vernal Pool Ecological Reserve: Eucalyptus Grove Removal (\$111,956)

The entire 10 acre site contains a grove of eucalyptus and poison oak, adjacent to about 1 acre of eucalyptus on the south, all of which appears to be one large grove. Vernal pool swales flow through the site from the west and south, and contain endangered Sebastopol meadowfoam, *Limnanthes vincularis*. The volatile chemicals in the eucalyptus kill all flora and fauna in the pools, and the *L. vincularis* does not extend through or past the site. In addition, the grove runoff flows into the Laguna de Santa Rosa with suppression effects on native flora and fauna. The objective of the project would be to remove most of the eucalyptus (with exception of nesting grove for Red-Tailed Hawks) and reestablish the seasonal wetland community and endangered species, both on-site and through the site to the vernal pool complex we own on an adjoining property to the east. The trees will be cut near the base and felled, cut into lengths for transport, and hauled from the area. Slash will be piled and removed also. Stumps will be tractor ripped and removed, or drilled and inoculated with decomposing bacteria, depending on costs. Non-game species that will benefit are Valley oak, endangered *L. vincularis*, many other potential vernal pools associated species, native grasslands and associated species. There are no listed or sensitive species on site due to the eucalyptus. Removal by larger companies with sale of wood for paper outlets is being investigated, thus funding costs could be significantly lower. A cooperative program with the local Resource Conservation District may also be less expensive and is also being investigated.

Indian Valley Wildlife Area: Osprey Nesting Platform Building and Placement (\$5,038)

Indian Valley Reservoir was created over 40 years ago with the flooding of Indian Valley in Eastern Lake County. The Valley oaks within the valley were left and persisted over the years providing nesting locations for osprey. Few to none of these skeleton trees remain. The project consists of the building and placement of three poles (20 feet in length) above the high water mark of Indian Valley Reservoir on the Indian Valley Wildlife Area. Work conducted will be the auguring of a three foot deep hole for the placement of each pole. Each pole will have a two foot square platform built on top to be utilized by ospreys for nest support. Signs shall be placed on or near each pole identifying the area as Indian Valley Wildlife Area. The proposed project will not impact any riparian vegetation, cultural sites, listed plant or animal species. Poles will be located to avoid the nesting bald eagle site on the northeastern edge of the reservoir. The work is to be done in late fall to avoid disturbing nesting bald eagles.

Napa Sonoma Marsh: Create Nesting Plover Habitat (\$55,978)

This project would place gravel on an old farm service road in the Huichica Creek Unit in order to create plover nesting habitat. Killdeer, California snowy plover, black-bellied plover, semi-palmated plover, and American golden plover frequent the Napa-Sonoma Marshes Wildlife Area. The service road is approximately 1.5 miles in length and will require approximately 3,000 tons of Class 2 road base to construct (3-4 inches in depth).

Carrizo Plain Ecological Reserve: San Juan Creek Riparian Fencing (Chimineas Unit) (\$151,141)

Approximately 3.9 miles of San Juan Creek runs through the western edge of the Chimineas Unit of the Carrizo Plain Ecological Reserve. This reach of the creek includes Broken Dam, a four acre pond, as well as several small year round pools. Livestock have been historically grazed throughout the entire riparian area and this has repressed and degraded riparian vegetation. Livestock grazing is expected to continue to benefit ecological resources in the uplands. The proposed project is to fence the entire riparian area in order to benefit riparian habitat, neotropical migrant birds, as well as southwestern pond turtles and spadefoot toads.

Canada de los Osos Ecological Reserve (ER): Weed Control for Grassland Bird Species Habitat Enhancement (\$11,196)

Medusa head is spreading on the east end of the ER, as well as in other small areas throughout the ER. The large areas would require spraying by helicopter to eradicate. Small areas could be spot sprayed from an ATV.

Napa Sonoma Marsh: Revegetation Project (\$5,598)

This project would provide improvement and extension of existing drip irrigation line/system and replacement of dead trees and shrubs along existing line (Northern Huichica Creek. Unit fence line along the railroad with new native tree and shrub plant stock. The line would be extended to the existing margins of the Buchli Stadium Parking Lot as well as extended approximately 0.25 miles from current end of drip line to the west.

Eden Landing Ecological Reserve (ELER): Burrowing Owl Habitat Enhancement (\$16,793)

This project will provide control of non-native plants, including annual mustard, wild radish to benefit burrowing owls and other native wildlife along levee roads. Burrowing owls are known at ELER and in the general vicinity, as well as California ground squirrels which provide abandoned burrows used by owls, and other grassland and wetland birds, including raptors and passerines. Approximately three miles of levee roads would be treated with herbicide.

Carrizo Plain Ecological Reserve: Yellow-star Thistle removal (Chimineas Unit) (\$8,397)

Yellow-star thistle is known to decrease habitat values for a number of native plant and animal species throughout California. At present, there are only three patches of yellow-star thistle totaling approximately 30 acres on the entire 30,000 acre Chimineas Unit. The proposed project is to spray the yellow-star thistle patches with Transline annually over a three year period. This will be expected to kill all three patches of yellow-star thistle to benefit native plants as well as native wildlife which inhabit the grasslands. The project is also expected to eliminate the potential for yellow-star thistle to expand to a much larger area thereby reducing any future costs.

Santa Rosa Plain Ecological Reserve: Atascadero Marsh Riparian Restoration Blackberry Removal (\$1,679)

Small stands of blackberry cover 5 acres of the 44 acre parcel. The plant is choking out open grasslands, riparian habitats, and small vernal pools on the property and severely restricting access. The berry patches will be removed by surface dragging with a tractor blade, piled, dried and burned. Surface removal will not cut the soils deeply. Following removal, herbicide will be used to treat remaining growth and all new growth annually for two years. Non-game species that will benefit are Valley Oak, Oregon ash, a historic vernal pool site that contained the endangered *L. vinculans*, many other potential vernal pool associated species, native grasslands and associated species (deer, raptors, passerine birds). A cooperative program with the local Resource Conservation District is being investigated. This parcel also has a public trail developed and managed by the local Sonoma County Regional Parks Department, and the blackberries are restricting vistas and invading the trail system. Regional Parks keeps the trails clean, but a wider effort is needed.

Napa River Ecological Reserve - Invasive Plant Species Control (\$19,033)

The objective is to eradicate or substantially control three (3) non-native plants (Harding grass, big leaf periwinkle, and blackberry) before the native plant ecosystem is substantially degraded or eliminated, and to prevent the spread of these highly invasive plants into other sites. The goal is to eliminate or substantially reduce the cover of the target plants by 80 percent. The Harding grass stand exists in the flat lands along the Yountville Crossroads parking lot; approximately one acre. The big leaf periwinkle is located on the east side of the Napa River along the public access trail; approximately one acre. Blackberry stands have filled the under story of the reserves oldest oak groves; approximately seven acres. Each of the species out-competes and displaces native plant species, decreasing wildlife value. Large stands of these plants can become a fire hazard during dry periods. Mechanical and manual methods will be used to control and eradicate the plants. Treatments will include mowing, cutting, pulling, and herbicide spraying. Species benefiting from the project include all native riparian and grassland plant species, neo-tropical migrants, raptors and small mammals.

Carrizo Plain Ecological Reserve: Prescribed Burn (Chimineas Unit) (\$27,989)

There are approximately 4,000 acres of mixed chaparral on the Chimineas Unit. Over half of this area has burned over the past 20 years. However, several large patches of decadent chamise are present in the northwestern corner of the Chimineas Unit. This area totals approximately 1,500 acres and there are no records of this area burning in over 100 years. The mixed chaparral in this area is positioned within several large stands of blue-oak woodland. The proposed project is to conduct a prescribed burn of approximately 1,250 acres in order to protect the blue-oak woodland from a catastrophic fire event and to benefit early successional plant and animal species.

Region 4

Los Banos/Mendota Restoration: Enhancement of Seasonal Wetlands (\$135,370)

This project would conduct physical manipulation of vegetation, and managed hydrology to change physical habitat characteristics, plant species diversity, and invertebrate production, and plant and invertebrate diversity. Site: One to three Wildlife Areas in Region 4. With funding support, monitoring could provide information on wildlife response.

Los Banos Sandhill Crane Winter Forage Habitat Restoration (\$16,793)

This project would restore 100 acres of perennial grassland (vegetation management).

Regional Ecological Reserves Vernal Pool and Grassland Habitat Enhancement (\$111,956)

This project would enhance non-native grassland and vernal pool grassland supporting numerous non-game species through a combination of grazing management, including necessary watering and fence infrastructure, and site security (addressing trespass farming, trespass tailwater disposal, vandalism, etc.). Primary sites are several Ecological Reserves in Region 4.

San Joaquin River Hardhead Study (\$120,328)

This project will study the hardhead (*Mylopharodon conocephalus*) spawning habits and characteristics in the Upper San Joaquin River of Fresno and Madera counties. The project will involve radio-tracking of marked fish and extensive field data collection to characterize their habitats, use patterns, and identify habitat structure and physical habitat parameters related to use by the species in the river system.

Sierra Foothill Streams Surveys (\$214,335)

This project will continue the ongoing Department effort to inventory fish, amphibian, and reptile species in Sierra Nevada foothill streams in the region. The basic inventory and distribution data is critical for understanding potential implications of various projects as well as the status of aquatic species in the central and Southern Sierra Nevada foothills.

Region 5

Burton Mesa Ecological Reserve New Public Entrance Gates, Fencing, Boundary Survey (\$128,750)

The Department manages over 5,000 acres in northern Santa Barbara County known as the Burton Mesa ER. The site contains a rare chaparral community endemic only in this area. It is currently being degraded by off-road vehicle use and unauthorized public use. This proposal is intended to fund the necessary boundary surveys, fencing, vehicular barriers, gates and public entrances at the reserve to protect the site's non-game and sensitive species and to encourage appropriate public use.

Burrowing Owl Enhancement Project (\$13,435)

The Department has the opportunity to enhance burrowing owl populations at three selected sites within Region 5, two in Orange County and one in San Diego County. The burrowing owl is a species of statewide conservation priority and is not listed as threatened or endangered by either the state or federal government. This proposal is intended to fund enhancements that will aid in the recovery of this species in select locations which will promote its long-term survival and potentially reduce the need for pursuing listing of the species.

Upper Newport Bay Ecological Reserve (UNBR), Back Bay Science Center, Orange County (\$895,651)

The construction of an approximate \$6 million dollar project is underway at UNBER; the Back Bay Science Center (BBSC). The project has not been completely funded, so only three out of four wings will be completed under the current contract. The three wings being constructed include 1) the BBSC “teaching lab” for the Department educational and research programs, 2) Shop, storage and boat garage for the Department use, plus public restrooms; and 3) County of Orange water quality laboratory. The 4th wing would contain offices for the Department’s reserve personnel, and work stations for volunteers (including Senior Volunteer Program), interns and for visiting researchers/students, plus a resource area/library and public meeting room. The construction has completed the mat foundation with stub-outs for utilities, but the remainder cannot be constructed until \$800,000 is raised. The Department has been working with other agency partners and not-for-profit organizations. The Department has signed MOUs with University College-Irvine, City of Newport Beach, County of Orange, California Wildlife Foundation, Newport Bay Naturalists and Friends and has partnership arrangements with others as well (Coastal Commission education staff is on-site) for coordination of programs at UNBER in the BBSC.

Currently a highly sensitive campaign is underway by some local public agencies. They are advocating the Department is unable to conduct programs or manage the ER because of limited resources. However, the Department’s commitment to the BBSC has been publicly declared numerous times over the last four to five years by the Department’s Regional Manager and the Executive Director. By the Department’s commitment to fund the remainder of the BBSC through the use of this one-time funding opportunity, it will reflect we are truly committed to managing the reserve in a proactive manner, we know we have a magnificent resource at Upper Newport Bay, and that we can succeed. By use of this one-time funding for this project, the Department will do more to enhance political relationships in Orange County and at the same time fulfill our mission to providing appropriate public education of Threatened & Endangered and non-game species.

Region 6

Imperial Wildlife Area: Wister Unit- Marsh Bird Management (\$173,724)

This project would provide a three-year management program including water for fresh-water marsh habitat and staff time for habitat maintenance and rotation.

Peninsular Bighorn Sheep Water Source Enhancement (\$90,685)

This project would provide for replacement and development of water sources for bighorn sheep in the Peninsular, Chocolate and Oracopia mountain ranges. The project will include replacement of one 20+ year old solar well, development of two new wells, installation of drinkers and restoration of natural tenajas, seeps and springs. Costs will include materials and transportation. Water source development will occur on Department owned or controlled lands, where possible.

Non-game Desert Fishes Down-listing and Recovery (\$235,108)

Recovery of five State and Federally listed non-game species and State Species of Special Concern in the Owens Valley and Mojave Desert is foreseen by two recovery plans; the 1998 *Owens Basin Wetland and Aquatic Species Recovery Plan*, and the 1984 *Recovery Plan for the Mohave Tui Chub*.

Mountain Yellow-Legged Frog Habitat Restoration (\$69,040)

Introduced trout will be removed from lakes and tributary waters using a variety of methods in order to benefit mountain yellow-legged frogs (MYLF) in five separate drainages.

Mitigation Bank(s) Plan for Mojave Desert Species (\$223,913)

This proposed project will develop a Mojave Desert Mitigation Bank Plan for the Mojave Desert area that is currently not covered under a multi-species habitat plan. This plan is desirable for the Department to obtain and maintain a continuous desert habitat area for the conservation and management of key threatened and endangered species. Conservation of such lands would also provide habitat for various special status species. The mitigation bank plan would determine if it is feasible for the Department to be sole owner and operator, or if it would be more desirable for a third party to operate and manage the bank, or a combination of the two.

Headquarters/Statewide Projects

Northern Spotted Owl Recovery Team Meetings (\$6,717)

The northern spotted owl is listed as a threatened species protected under the Endangered Species Act. The U.S. Fish and Wildlife Service has convened a team of government and non-government scientific and technical experts to develop a recovery plan for the owl. Team members were selected based on nominations from federal land management agencies, the governors of Oregon, Washington and California, the timber industry and the conservation community. This project will allow the Department to participate and provide advice on the development and implementation of recovery plans that will serve as advisory documents to guide Federal, State, and private activities affecting the northern spotted owl. The goal of this recovery plan is to recover the spotted owl such that it can be removed from the list of threatened or endangered species.

Urban Nuisance/Depredation Wildlife Project (\$283,250)

The Department is authorized to respond, evaluate and deal with wildlife/human incidents throughout the State. This project is intended to facilitate and mitigate some of the demand on Department personnel involved with these incidents.

Objectives:

- Reduce the workload on Department personnel by contracting with USDA-Wildlife Services (USDA-WS) to respond as the agent to public safety and some depredation incidents for lions, bears, wild pigs, coyotes and a variety of other non-game species. USDA-WS would also act as the agent of a depredation permittee or the agent of the Department for public safety incidents to take the offending animal(s).
- Facilitate a statewide computer-based application for issuance and response to public requests for depredation permits.
- Facilitate a statewide computer-based application for providing the public information about dealing with nuisance wildlife.
- Improve knowledge of local first responders by providing local law enforcement and park agencies a training course (including a DVD) regarding wildlife behavior and Department policies.
- Provide training to Department personnel in the use of non-lethal firearm tools for dealing with wildlife incidents.

California Bat Conservation Plan - Phase I (2003) (\$22,451)

California has 25 bat species; one on the Federal Endangered Species list, ten currently recognized by the Department as Mammal Species of Special Concern (MSSC), four additional species proposed for MSSC status, four listed as Sensitive by the Forest Service, and five designated by BLM as Sensitive. Like the Partners in Flight bird management plans developed nationwide for various bioregions, California needs similar habitat-based plans for bats. Draft conservation plans have been completed for three western states: Arizona, Colorado and Nevada. These documents provide resource managers and environmental consultants with current distributional and ecological information on all bat species, plus an overview of the conservation threats and management issues relevant to this very important and often overlooked mammalian group.

The objective of this project would be to develop a California Bat Conservation Plan (Plan). The Plan would be peer reviewed, published and distributed under this project. The Plan would: 1) Provide resource managers and researchers with current information on the distribution, status, ecology, and conservation/management needs for each species; and 2) Assist state and federal agencies with decision making and priority setting for the conservation and management of bat populations in California.

This project already has been approved by the United States Fish and Wildlife Service (USFWS).

Develop Initial Components for a Western Burrowing Owl Conservation Strategy (\$107,577)

The Department currently has a 2003 State Wildlife Grant from USFWS to prepare a statewide conservation strategy for the burrowing owl in California. By securing matching non-game funds now, the Department will more easily meet the matching requirement and will have funds to initiate some research, surveys, education, or training. Examples of research needed include: a) probability of detection via standard four survey visit protocol; b) study the fate of owls that are evicted from their burrows via one-way doors; and c) identify methods to attract and maintain ground squirrels at burrowing owl breeding sites. Research and management priorities will be developed in cooperation with the Regions, USFWS, and owl researchers. The owl is a high priority within the Department due to the past listing petition (2003), and the conflict with developers due to take potential from discing, grading, and development projects. The owls are protected from take, as are their nests, by Department Fish and Game Code. However, because the species is not listed, CEQA projects rarely provide mitigation for owl habitat impacts and owls are often permanently evicted from their nest burrows during the non-nesting season. This project already has been approved by the U. S. Fish and Wildlife Service.

Western Pond Turtle Conservation Strategy (\$80,609)

The Western Pond Turtle, *Clemmys (Emys or Actinemys) marmorata*, is our only remaining native freshwater turtle and is a California State Species of Special Concern (SSSC). This turtle occurs along the Pacific rim of North America from Baja California to the state of Washington. While some populations appear to be stable, most appear to be declining in numbers, with populations in some parts of California in the most serious trouble or already extirpated. There is currently no statewide or comprehensive Strategy for the conservation of this species. Development of one is essential to preserve existing populations, bring others back to sustainable levels, and prevent the need for future listing under either state or federal statutes. The Strategy would begin with a comprehensive, range-wide review of existing information (published and otherwise), with the emphasis on California, but with input from researchers across the range of the species. Additional input will be provided by Department and other agency staff via facilitated workshops and the review process. This effort would establish the foundation for bio-regionally specific conservation actions and likely provide sufficient information for a publishable product (a Pond Turtle handbook) that could serve the future needs of biologists, agency personnel, and other interested parties who might be involved in the management or conservation of this turtle.

The peer-reviewed, published strategy would:

1. Provide resource managers and researchers with current information on the distribution, status, ecology, and conservation/management needs for populations of this turtle;
2. Identify issues, and propose actions to assist state and federal agencies with decision-making and priority setting for the conservation and management of Western Pond Turtle populations in California in a bioregional framework.

Bioregions will be defined according to those identified by the California Biodiversity Council; (see <http://ceres.ca.gov/biodiversity/bioregions.html>).

3. Identify conservation actions for public and private landowners.
4. Provide standards and guidelines for surveying and monitoring techniques.
5. Provide standards and guidelines for mitigation under CEQA.
6. Identify educational needs.

This project already has been approved by the U. S. Fish and Wildlife Service.

Greater Sage-Grouse (\$168,354)

The Department would conduct a research project on greater sage-grouse in California. The Department would contract out for research services by graduate student assistants for obtaining information on population demographics, genetics, and habitats of greater sage-grouse in California in accordance with State Wildlife Grant T-9-1. The objectives of the study would be to:

- a) Determine sex- and age-specific movement patterns and home ranges of radio-marked sage-grouse.
- b) Estimate nest success of radio-marked sage-grouse.
- c) Estimate sex- and age-specific survival of radio-marked sage-grouse.
- d) Investigate natal dispersal patterns of radio-marked greater sage-grouse.
- e) Describe genetics of greater sage-grouse study populations and compare levels of genetic diversity between subpopulations.
- f) Determine seasonal habitat use and compare habitat quality between subpopulations of greater sage-grouse.

This project already has been approved by the U. S. Fish and Wildlife Service.

Hoopa Fisher Study (2006) - Dispersal behavior, den site selection, habitat use, and vital rates of Pacific Fisher in North Western California (\$93,297)

The Wildlife Conservation Society and Hoopa Tribal Forestry are currently engaged in intensive Fisher studies in northern California. Their research was initiated in the fall of 2004 and is currently ongoing until February 2007, when existing funding expires. If funded by the USFWS via State Wildlife Grant funds, and the Department via Non-game funds, they could collect an additional season of data through the fall of 2007, and increase their sample size to provide higher scientific validity of the results. The project objectives include: 1) describe Fisher dispersal behavior patterns; 2) quantify Fisher den sites and habitat use; and 3) compare male and female Fisher survival rates using demographic data over a three year period.

Conclusions from the research effort will be used to better understand Fisher dispersal patterns and survival, and to more effectively protect all necessary habitat components for Fisher on the Hoopa Valley Reservation, and elsewhere in California as appropriate. The results of the work will also help inform the Department's statewide Fisher conservation strategy effort, as well as efforts by the USFWS to conserve Fishers on federal lands. The Coastal Martes Working Group supported this project as their highest priority Fisher research need. There is very little information available on Fisher demography, therefore,

this project is critically important in California because Fisher on or near Hoopa tribal lands have been identified as a potential source population of animals for translocation.

Revision of Mammal Species of Special Concern (MSSC) Document (2006) (\$27,429)

The original 1986 document is outdated. This project was stalled approximately a year ago, due in part to one contractor being unavailable through out-of-country responsibilities. Now, to finish the project, the Department needs to update the information provided by the contractors. The 1998 update was never completely finished by contractors and now needs to be reviewed and updated by species experts. A new team of contractors would update the document, provide peer and agency review, and publish the finished version in a fashion similar to that for the revised bird MSSC document and the proposed ARSSC update.

Xantus's Murrelet Recovery Planning and Monitoring (\$30,857)

Xantus's murrelets were state-listed as threatened in 2003 due to a variety of threats. They nest on some of the Channel Islands in southern California. Since the time of listing, the Department has not engaged in recovery planning with the National Park Service and other partners in the Channel Islands. A Recovery Plan needs to be written for this species in order to provide a road map to recovery. Monitoring of the murrelets is needed on Santa Barbara Island (SBI), the largest colony in California, where there has been evidence of decline. Additional monitoring could also be conducted at Anacapa Islands to better document murrelet recovery from rat eradication efforts of the recent past. Nest sites need to be mapped and marked with permanent markers, and all data collected on murrelets on SBI needs to be combined in one report to set the baseline conditions. Additionally, other stakeholders (National Oceanic and Atmospheric Administration, United States Navy, Conservancies, etc.) need to be engaged in murrelet recovery, and a coordinator needs to be hired to facilitate that process and dialogue, and to help produce educational materials for kayakers, hikers, and various fishing interests. Coordination with those involved in seabird restoration activities under the Montrose Settlement also needs to occur. A second volume of a Xantus's Murrelet Symposium also needs to be completed to help compile existing information on this globally-rare seabird.

Tricolored Blackbird (\$117,599)

The Department is proposing several projects to further the conservation of this species, as follows: 1) on State Wildlife Areas, identify potential for creating and enhancing habitat and develop a management plan; 2) conduct annual field investigation, for three years, to find nesting colonies and examine colony sites after the breeding season to determine productivity; and 3) contribute to investigation of genetic differences between northern California and southern California birds. This proposed project was previously approved by the leadership team for the State Wildlife Grants funding in 2006.

Investigation of Lead Toxicity in Raptors (\$167,934)

This is a collaborative project between the Department and the UC Davis Wildlife Health Center to investigate emerging issues and concerns related to lead toxicity in wild raptor

populations, including the California condor, golden eagle, bald eagle, and numerous hawk and owl species. The study will work to:

- 1) Assess heavy metal exposure in sentinel wildlife. Evaluate heavy metal exposure and associated morbidity and mortality in sentinel wildlife species in various habitat types that will represent a variety of environmental and anthropogenic sources of these contaminants in California.
- 2) Trace wildlife heavy metal intoxications to their sources. Identify sources of heavy metal contamination in California wildlife by comparing radio isotopic composition of heavy metals in sentinel wildlife samples to potential sources that can be traced to anthropogenic activities and environmental contamination.
- 3) Evaluate state regulatory efforts aimed at mitigating ammunition-based sources of lead in California Condors. If lead ammunition use is banned for use in deer hunting in the California Condor range, evaluation of lead exposure in sentinel wildlife over time, both within and outside the condor range will contribute to an assessment of the effects of this mitigation effort.

High Elevation aquatic surveys (\$44,783)

This project will provide State match dollars for ongoing Department efforts to determine the distribution and status of key aquatic wildlife species in the Sierra Nevada and Southern Cascade mountain ranges such as amphibians, native fish, and describe their habitat characteristics.

UC Davis, Coop Applied Research Studies (\$568,177)

This project will be a collaborative effort with the UC Davis Center for Population Biology to conduct needed applied research activities on species of great conservation need in California. The intent is to also strengthen the relationship between the Department and the UC system in working on burgeoning wildlife and fish issues in the state and foster scientific approaches to addressing these issues while providing additional academic opportunities to faculty and graduate students.

Burrowing Owl Surveys Statewide (\$67,174)

This project will provide us with a revised estimate of the statewide owl population, and provide a second data point for population trend determination from the previous work in the early 1990s. Population trend data is needed to help leverage action for the Department's conservation strategy that is currently underway via State Wildlife Grant funds. Results of the project will also help leverage CEQA mitigation and inclusion of this species in NCCPs, and other such large scale plans. For 2006 and 2007, it will include NE and SE regions of California to make up for the gap from previous work. The issue of owl numbers in these locales was a point of contention during the petition review process. This project will also help the Department proactively identify where to conserve lands for burrowing owls and associated species, and will identify landowners that we can negotiate with, using landowner incentive programs where feasible.

Infrastructure Inventory DFG Lands- Pilot Effort (\$279,891)

Assess the feasibility and identify steps needed to develop a comprehensive infrastructure 5-year plan that identifies needs for capital outlay, deferred maintenance, ongoing maintenance and habitat management for DFG lands.

R1- DFG Lands Public Education Trails (\$50,380)

Upgrade/create interpretive trail (grub and chip) (Mad River Slough-1 mile, Eel River - Cock Robin Island Unit -3 miles, Shasta Valley- 2 miles) include interpretive signs; totals 6 miles.

R1- DFG Lands Interpretive Panels (\$30,228)

Purchase and install interpretive displays (Butte Valley, Ash Creek, Fay Slough, Mad River Slough, Tehama, Lake Earl, Honey Lake, Shasta Valley); eight sites total.

R2- Lands Public Education Interpretative Panels (\$33,587)

DFG lands are managed without the benefit of an operating budget. To enhance visitor use and enjoyment, interpretive signs are needed to provide educational and interpretive information to the public related to fish and wildlife resources present at the site. Signs will be constructed of durable materials with artwork and descriptions of species and habitats viewable to the public and located at the entrance to the site or along trails

R4- Los Banos Grassland Education Center Support (\$67,174)

Funds would support materials and contract employees as part of a Department contribution to multi-funded interagency education program (ongoing) located on Los Banos Wildlife Area. Almost 2,000 local schoolchildren attend yearly.

R4- Public Outreach & Education (Fresno area) (\$111,956)

The Department and Fresno Metropolitan Flood Control District (District) are partnering in a pilot project to identify collaborative potentials in public outreach, and refine possible future efforts. The District operates around 40 water management basins in the area that support significant numbers of resident and migratory shorebirds and waterfowl. Some are near schools, bike trails, or associated with parks. The District also conducts extensive public education campaigns for water quality issues. The District and the Department will develop key concepts and “messages” for the public, linked to nearby opportunities to view wildlife. Suitable sites, events, and public information campaigns will be identified, and materials produced for distribution. A pilot project to install educational signage, conduct local outreach, and possibly develop a link to a nearby school is included as a key element.

Regional Projects: State Match for Resource Assessment (\$201,522)

Each of the six Department regions is conducting important resource assessment work on DFG and other accessible lands to determine the distribution and status of fish, wildlife, and native plant species. This project provides some of the State match for each of the regions allocation of Federal State Wildlife Grant (SWG) funding consistent with the Wildlife Action Plan in implementing priority assessments, surveys, and applied research on California's fish and wildlife species and habitats.